EQUIPMENT LIST (cont.) PROJECT DESCRIPTION B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR I. GENERAL PHASE CHART This project involves the reconstruction of an existing Traffic Control Signal with interconnect, street lighting and a traffic surveillance camera at DESCRIPTION QUANTITY 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 the intersection of MD 320 (Piney Branch Rd) and MD 787 (Flower Ave) in Maintenance of traffic per 3 EA Montgomery County. A new mast arm traffic signal with interconnect, street assignment. lighting, traffic surveillance camera and Countdown pedestian signals with audible pushbuttons shall be installed at this location. MD 320 (Piney Branch Rd) Test Pit Excavation 11 C.Y. is assumed to run in an east-west direction. 12" white heat applied 540 L.F. II. INTERSECTION OPERATION permanent preformed thermoplastic pavement The intersection shall continue to operate in a NEMA six-phase, marking. **4**-G-/R **4**-G-/R semi-actuated mode, with the MD 320 (Piney Branch Rd) approaches PHASE 1 & 5 running concurrently. The Exclusive/Permissive left turn phases for 125 L.F. 24" white heat applied both approaches of MD 320 (Piney Branch Rd) shall remain in operation. CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6 permanent preformed The pedestrian phases across MD 320 (Piney Branch Rd) shall now be thermoplastic pavement Countdown pedestrian phases with audible pushbutton actuation. The pedestrian phases across MD 787 (Flower Ave) shall now be marking. DW DW DW DW DW PHASE 1 & 6 **←**G-/G | **←**G-/G | Countdown pedestrian phases with audible pushbuttons on recall. 280 L.F. Removal of existing permanent DW DW D₩ The MD 787 (Flower Ave) approaches shall also continue to 1 & 6 CHANGE **←**Y-/G | **←**Y-/G pavement line markings run concurrently. 300 L.F. DW Standard type A combination D₩ R | **←**G−/G | **←**G−/G | DW PHASE 2 & 5 2. A full-traffic-actuated, eight-phase controller with video interface curb and gutter 12" gutter pan and all necessary equipment housed in a NEMA size "6" base-mounted WK D₩ DW DW DW DW D₩ cabinet shall be installed at this intersection. 2 & 5 CHANGE 1525 S.F. 5" concrete sidewalk. Montgomery County signal shop shall install APS control unit into controller DW ! DW WK DW PHASE 2 & 6 cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons Detectable warning surface for 140 S.F. to Mr Keith Lord of the Montgomery County Signal Shop for testing and curb ramps R | FL/DW | FL/DW | FL/DW | DW PED CLEAR programming. 2 wire Central Control unit 1 EA III. SPECIAL NOTES R DW DW DW DW DW 2 & 6 CHANGE 1 EA Adjust and re-ring existing 1. The Contractor shall be responsible for terminating all signal cables, span wire (each span). DW D₩ DW DW DW PHASE 4 & 8 excluding interconnect, to the appropriate terminals and shall properly label each cable. Any size lighting arm on signal 2 EA pole with 250 watt HPS lamp & DW D₩ DW DW DW 4 & 8 CHANGE 2. Disconnecting and splicing of interconnect cable shall be performed by Montgomery luminaire. County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. All controller cabinet wiring will be DW ٦ R PHASE 4 & B ALT RR 8 EA Audible/tactile pedestrian performed by Montgomery County Forces. Contact Kamal Hamud at (240) 777-8761 seventy-two hours in advance of intended work. pushbutton station & signs. R | DW | FL/DW | FL/DW | FL/DW | FL/DW | PED CLEARANCE G DW DW 6 EA Breakaway Pedestal pole All underground and overhead utilities shown on these plans are schematic only (Any size) DW DW DW DW DW DW DW DW 4 & 8 ALT CHANGE and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. LED 16" countdown pedestrian 8 EA If the Contractor perceives that a conflict between the utilities and the traffic signal head. FLASHING FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | DARK | DA signal will occur, the Contractor shall notify the Project Engineer immediately OPERATION Mast arm pole and 50' mast arm any "T" dimension 2 EA so that the conflict may be resolved. Contact Mr. Mike Kinney at (240) 777-8760 seventy-two hours in advance of intended work for wiring relocating of traffic surveillance camera equipment including 1 EA Remove and dispose of pole mount camera cabinet. materia! & equipment WIRING DIAGRAM <u>WIRING KEY</u> per assignment. 5. APS will function as follows: Twin mast arm pole & X,Y,Z,aa,bb,cc,dd,50′(cut to 38′) /70′ mast arms any "T" TO CROSS PINEY BRANCH ROAD ee,ff,gg,hh,jj,ll,mm Y-CONDUCTOR ELECTRICAL dimension. CABLE (NO. 14 A.W.G) When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message "Wait to cross Piney Branch 4 EA Video detection camera & at Flower, crosswalk angles left ." cable up to 500' A,B,C,D,E,F,G,H,N, b. When the WALK phase begins, the pushbutton unit will provide a rapid tick which 750 L.F. 12-pair communication cable - B, H, N, O, T, U, W, will last for the duration of the WALK phase. 0,P,Q,R,S,T,U,W self supporting or jelly-filled. bb,cc,dd,ee,jj,ll TO CROSS FLOWER AVENUE 720 L.F. Cable - 1 conductor, No. 250 5-CONDUCTOR ELECTRICAL Q,WXKCMIL, Cu, Use When pedestrian locates and presses the pushbutton for an extended time, the CABLE (NO. 14 A.W.G) pushbutton unit will announce the following message "Wait to cross Flower A,B,C,D,E,F,G,H,N,O,P,— Q,R,S,T,U,V,W Disconnect, pull back and at Piney Branch, reroute cable. b. When the WALK phase begins, the pushbutton unit will provide a rapid tick which 210 L.F. Schedule 80 rigid PVC conduit will last for the duration of the WALK phase. A,C,F,G,P,V,W,Y,gg,hh,mm up to 4" - slotted. √ - 2-CONDUCTOR TRAY 11--- $\neg N \cdot M \cdot dd$ A,C,F,G,V,W,gg,hh,mmCABLE (NO. 12 A.W.G) The contacts for Montgomery County and SHA are as follows: 230 L.F. Schedule 80 rigid PVC conduit up to 4" - trenched. w - STRANDED BARE COPPER GROUND A,F,hh ___ WIRE (NO. 6 A.W.G.) Mr. Bryan Young Mr. Mike Kinney Mr. Richard L. Daff, Sr. 63 S.F. Assistant District Engineer - Traffic 8036 Install overhead or ground Mont. County Traffic Chief, Traffic Operations Division P.W.Y Phone: (301) 513-7318 240-777-876Ŏ mounted sign (including Phone: (410) 787-7630 hardware). 798424 Mr. Vernon Stinnett da 2-CONDUCTOR ELECTRICAL bb CABLE (NO. 14 A.W.G) Assistant District Engineer - Maintenance Mr. Keith Lord Phone: (301) 513-7304 670 L.F. -700 No. 6 AWG stranded bare Mr. Kamal Hamud · 5_======== C.G. copper ground wire. Mont. County TMC Center 240-777-8761 Signal Shop (Mont Co.) 301-674-8965 3 EA Weatherhead, 3 inch. 8040 Mr. Augie Rebish District Engineer – Utility Phone: (301) 513–7350 A,F,K,hh1 EA Metered service pedestal Mr. Sonny Bailey Coil 50' of (3) 1 embedded. 99 CONTROL CABLE (CAMERA TO Manager, Sign Shop Operations conductor 250 KCMIL hh (CONTROLLER) UP TO 500' 410-787-7670 cable at utility pole. 45 L.F. 8043 Electrical cable 1-conductor **←** − B,J,jj В,Н,Т,Ш,Ж, No. 4 AWG THHN/THWN. EQUIPMENT LIST bb,cc,jj,ll kk-TRAFFIC SURVEILLANCE CABLE (TO BE REROUTED / INSTALLED BY 3 EA Furnish and install electrical 8045 handhole. MONT, COUNTY) D.E.R.S.W. ---**←** B,H,J,jj A. EQUIPMENT TO BE SUPPLIED BY S.H.A.. Z,aa,ff II 12-PAIR VOICE GRADE INTERCONNECT 3 inch diameter PVC conduit 30 L.F. 8049 mm∫CABLE (SELF SUPPORTING) schedule 80, riser QUANTITY DESCRIPTION nn- EXISTING 12-PAIR VOICE GRADE INTERCONNECT CABLE 44 EA 12" LED signal head section. — В,Н,jj Controller cabinet, size "6" 1 EA 2 EA Cut, clean, galvanize and cap 00-3-1 CONDUCTOR ELECTRICAL Video detection interface 1 EA B,H,U,W, R.W.Z 9086 CABLE (NO. 4 A.W.G.) traffic signal structure. equipment: 1–4 cameras cc,jj,ll— (To be installed by signal shop). PP-3-1 CONDUCTOR ELECTRICAL CABLE (NO. 250 KCMIL) 1165 L.F. D, E, M7 Electrical cable -_ D,E,S,W, 2 conductor (No. 14 AWG). B,H,U,W, aa,ff 63 SF Sheet aluminum signs to consist of: (mast arm or pole mount) ► - GROUND ROD 1330 L.F. Electrical cable -5 conductor (No. 14 AWG). D-3(1) "Piney Branch RD 2 EA 8500> / Piney Branch RD POLES 1650 L.F. Electrical cable -8057 STATE OF MARYLAND <8500" sign, (variable x 16").</pre> conductor (No. 14 AWG). DEPARTMENT OF TRANSPORTATION dual faced mast arm mounted D,E,ff-STATE HIGHWAY ADMINISTRATION 100 L.F. Electrical cable -2 EA D-3(1) "Flower AVE <8700 2 conductor (No. 12 AWG) TC. Flower AVE 8700>" sign, (variable x 16") dual faced. T, W, bb-D,E,M,ff⁾ 1 EA 8064 Install controller and cabinet MD 320 (PINEY BRANCH RD.) mast arm mounted pole mount. TOD NO:XX445-21 SHA NO:MO206A54/B54 R3-5L "LEFT TURN ONLY" AND MD 787 (FLOWER AVE.) 1 EA 1 EA Install controller and cabinet $sign_{*}$ (30" x 36") MD 320@ MD 787 base mount. mast arm mounted TAKOMA PARK, MARYLAND 3 EA R10-11b "NO TURN ON EQUIPMENT TO BE REMOVED GENERAL INFORMATION SHEET RED" sign. (24"x24"). mast arm mounted Montgomery County Forces shall remove the controller and all auxilliary equipment CALE NONE DATE 1/4/2010 CONTRACT NO. XX4455185 from the controller cabinet. The cabinet and all other removed signal materials are to Pedestrian_education R10-3(1) 4 EA become property of the contractor. sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS FLOWER AVENUE".) DESIGNED BY R.R.Z. COUNTY ___MONTGOMERY EQUIPMENT TO BE SUPPLIED BY MONTGOMERY CABINET LOGMILE ___15032001.63 pole mounted. DRAWN BY_ TIMS NO. ____J436 Pedestrian education R10-3(1) QUANTITY DESCRIPTION CHECKED BY _____ STREET TRAFFIC STUDIES, LTD. sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO 400 Crain Hwy.,N.W. Glen Burnie,MD 21061 EΑ TOD NO. -.A.P. NO._ 1 EA Splice cabinet, CROSS PINEY BRANCH RD".) Ph (4IO) 590-5500 pole mounted. Fax (410) 590-6637 TS NO. 2684B SHEET NO. DRAWING NO. 2 OF 2 T-233 5675GI.DGN PLOTTED: TUESDAY, JANUARY 05, 2010 AT 10:15:11 AM